

## **5.0 PLAN AND PROJECT COORDINATION**

### **5.1 LOCAL PLANNING AND TECHNICAL ASSISTANCE**

The State Hazard Mitigation Officer (SHMO) has led the mitigation planning effort in Montana. Through planning grant funding from FEMA, communities have been motivated to develop, in many cases for the first time, plans for mitigating hazards. As of June 19, 2007, 43 Local PDM Plans had been approved by FEMA (41 county plans and two tribal plans) and 20 plans were in the advanced drafting stage (15 county plans and five tribal plans). **Figure 5.1-1** shows the planning status of counties in Montana.

#### **5.1.1 Funding Process**

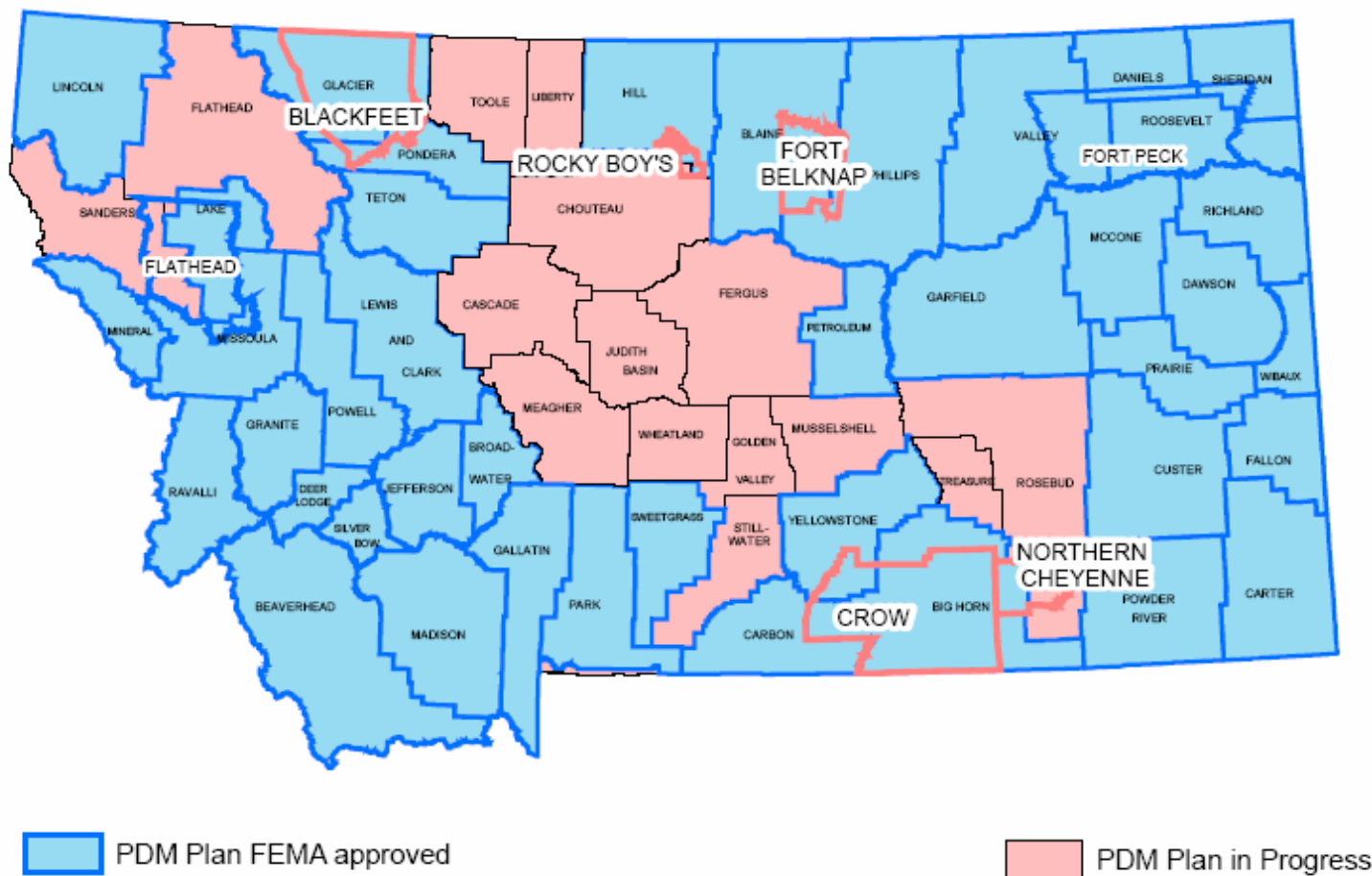
The process for this success began in 2002 when funding from FEMA for mitigation plans was designated for the State. Counties and tribes were informed of the available funding through letters, internet postings, and presentations at county meetings and conferences. The individual applicants were then required to submit notices of intent to the state. Following the notice of intent letters, applicants then had to fill out a thirteen page application stating, among other things, how much funding was needed and how it would be used to accomplish the end product of an approved mitigation plan. Based on the response received, the state was able to fund all of the requests. The SHMO then conducted a second recruitment and was successful in adding six more counties. The funding amounts for local plans varied from \$2,000 for a single county doing the plan themselves to \$30,000 for a multi-jurisdictional plan. On average, counties received \$7,500. Once all of the funding was allocated, newly interested communities were encouraged to find alternative funding sources.

During 2004-2005, many communities combined the PDM planning effort with the similar Community Wildfire Protection Plan initiative under the National Fire Plan through funding from the Department of Interior, Bureau of Land Management. Partnering the development of these two plans not only made sense but allowed for a landmark joint venture between agencies for planning in Montana.

The Pre-Disaster Mitigation Competitive program (PDM-C) has provided funding for completion of additional planning projects in Montana. In 2005, FEMA awarded the State of Montana \$208,500 in PDM-C funds to complete the remaining Local PDM Plans. Under this funding effort 11 county plans and five tribal plans were developed. One of the county plans was a combined PDM/CWPP joint effort coordinated by DES and BLM. A 25 percent cost-share match was provided by the local jurisdictions. Also in 2005, FEMA awarded the Montana University System \$255,017 in PDM-C funds to complete Disaster Resistant University PDM Plans at eight campuses. The local jurisdictions/grant recipients contributed the 25 percent cost-share required by FEMA.

Figure 5.1-1 Planning Status of Local Montana PDM Plans

## Montana Pre-Disaster Mitigation (PDM) Program 19 June 2007



### **5.1.2 Technical Assistance**

Communities have been assisted in developing mitigation plans in large part by the SHMO. The SHMO conducts an annual PDM-C/Benefit-Cost Analysis (BCA) workshop each September for potential applications for PDM-C grants and is often assisted in teaching these courses by FEMA officials. Frequently, the SHMO provides technical assistance on a case-by-case basis as requested over the phone, via e-mail, or in person. Significant technical assistance is also provided during the State review process of the plans. If needed, detailed comments and suggestions for improvement are made prior to State approval and submission to FEMA.

The SHMO is not the only person providing technical assistance with the planning. Specifically, with the development of risk assessments, the local National Weather Service offices, Montana Bureau of Mines and Geology, and Montana Department of Natural Resources have assisted communities with supportive data and expert review of the various hazards being analyzed. Typically, the local communities contact their area offices directly for technical assistance. Additional resources to the communities include their DES District Representatives with whom they meet regularly.

## **5.2 LOCAL PLAN INTEGRATION**

Completed local mitigation plans are submitted to the SHMO at the Montana Disaster and Emergency Services Division for state approval and submission to FEMA – Region VIII. The plan is then reviewed in detail by the SHMO for compliance with the DMA 2000 and additional State requirements. The review process at the State level typically takes up to 30 days. During this timeframe, the SHMO will approve the plan, provide comments in the plan's crosswalk, and either submit the plan for to FEMA – Region VIII for approval or return the plan to the local jurisdiction for improvements with statements specifically outlining the criteria not met. Once at FEMA – Region VIII, the review process may take up to six months for final approval to be given or returned for improvements.

Once approved by the State, the local plan can be incorporated into the State Hazard Assessment and Mitigation Strategy. This integration is done through a variety of means. First and foremost, the local plan automatically becomes an annex to the State Plan and the Montana Disaster and Emergency Plan. Second, specific plan contents are integrated into the State Hazard Assessment and Mitigation Strategy. This formal incorporation will occur on an annual basis during the yearly plan review and update.

The Hazard Assessment portion of the plan contains a section for local data. Hazard Risk maps are included in the State Plan that represent the local jurisdictions vulnerability to each hazard. These maps are linked electronically to the Local PDM Plans where additional information is available. Potential loss data from the local risk assessments are consolidated in a table for each hazard. For this section to be more useful, a consistent methodology for local risk assessments will need to be developed. Although useful at the local level, the various methodologies being used across the state do not allow for direct comparisons.

In the Mitigation Strategy, local projects that can be applied to statewide concepts will be integrated into the statewide strategy of potential actions. More importantly, the local mitigation strategies will assist the SHMO and SHMT when reviewing project applications, providing technical assistance, and researching funding options.

The integrated State-approved Local PDM Plans are presented in **Table 5.2-1**.

**Table 5.2-1 Integrated State-Approved Local Mitigation Plans**

<b>County/Tribe</b>	<b>Plan Date</b>	<b>Date Approved</b>	<b>Date Integrated</b>
Beaverhead County	May 2004	October 15, 2004	
Big Horn County	April 2006	August 8, 2006	July 2007
Blaine County	August 2005	July 19, 2006	July 2007
Broadwater County	January 2004	September 19, 2006	July 2004
Carbon County	August 2005	March 23, 2006	July 2007
Carter County	December 2004	March 23, 2006	July 2007
Confederated Salish-Kootenai Tribe	September 2005	March 23, 2006	July 2007
Custer County	December 2004	June 28, 2005	July 2007
Daniels County	September 2003	March 12, 2004	July 2004
Dawson County	December 2005	December 19, 2006	July 2007
Deer Lodge County	June 2005	November 18, 2005	July 2007
Fallon County	November 2005	April 5, 2006	July 2007
Fort Peck Reservation	September 2003	March 8, 2004	July 2004
Gallatin County	February 2006	December 19, 2006	July 2007
Garfield County	January 2007	March 3, 2007	July 2007
Glacier County	December 2004	September 26, 2005	July 2007
Granite County	November 2005	July 12, 2006	July 2007
Hill County	August 2005	March 28, 2006	July 2007
Jefferson County	January 2005	May 9, 2005	July 2007
Lake County	December 2005	March 28, 2006	July 2007
Lewis and Clark County	April 2005	June 13, 2005	July 2007
Lincoln County	February 2005	June 3, 2005	July 2007
Madison County	June 2004	October 1, 2004	July 2007
McCone County	December 2005	December 19, 2006	July 2007
Mineral County	February 2005	June 8, 2005	July 2007
Missoula County	October 2004	December 27, 2004	July 2007
Park County	August 2005	February 6, 2006	July 2007
Petroleum County	August 2003	November 4, 2003	July 2004
Phillips County	August 2005	August 2, 2006	July 2007
Pondera County	December 2004	August 18, 2005	July 2007
Powder River County	December 2006	May 31, 2007	July 2007
Powell County	July 2004	December 23, 2004	July 2007
Prairie County	December 2005	August 29, 2006	July 2007
Ravalli County	December 2004	May 9, 2005	July 2007
Richland County	December 2005	December 19, 2006	July 2007
Roosevelt County	September 2004	December 20, 2004	July 2004
Sheridan County	September 2003	December 2, 2003	July 2004
Silver Bow County	February 2004	September 9, 2004	July 2007
Sweet Grass County	January 2005	June 3, 2005	July 2007
Teton County	June 2005	April 20, 2006	July 2007
Valley County	September 2003	December 29, 2003	July 2004
Wibaux County	December 2005	August 8, 2006	July 2007
Yellowstone County	May 2004	January 14, 2005	July 2007

## **5.3 PROJECT PRIORITIZATION**

In Montana, most mitigation projects from construction projects to community outreach are done at the local level. County and city government typically make the decisions governing projects from project design to implementation for their jurisdictions. With a state the size of Montana, local officials know the problems and issues within their community's best. The variations in climate, terrain, and population make each jurisdiction unique. What may work in one community, may not work in another. Rather than dictating the projects that should be done at the local level, the State typically acts as a guide and resource. Continuing in this spirit, only projects that are statewide in nature or serve as a good example for projects at the local level are listed in this plan as potential actions. As funding becomes available, however, the State will prioritize the individual projects. Communities applying for funding will need to submit a project application. Two applications exist – one for planning and another for non-planning projects. The type of project being submitted dictates which application should be completed. Based on the information provided in the application, the projects are scored and prioritized.

### **5.3.1 Mitigation Review Committee**

A project review committee, know as the Mitigation Review Committee, is a team of project reviewers representing various levels of government and organizations and geographical parts of the state. This committee is considered a subset of the State Hazard Mitigation Team. Members are knowledgeable in hazard mitigation practices, project engineering, environmental review procedures, cost-benefit methods, vulnerabilities, and/or disaster services. Examples of potential members include:

- State Hazard Mitigation Officer
- State Floodplain Manager
- Local (District, County, and/or Tribal) DES Representatives
- Montana Department of Transportation Representative
- Civil Engineer
- State Fire Mitigation Representative
- Meteorologist
- Representatives from Recently Damaged Areas
- GIS Representative
- MACo and/or League of Cities and Towns Representatives
- Insurance Representative
- University and/or Hazard Representatives
- Private Advisory Group Representative
- Media Representative
- Congressional Representative
- Utility/Transportation Representative
- Economic Development Representative
- Grant Program and/or Fiscal Representative

As needed, the Mitigation Review Committee is responsible for reviewing and ranking project applications. The committee does have the authority to resolve discrepancies and make special considerations for a project, either positive or negative, if needed. The prioritization scheme that follows, however, takes into consideration the most important factors.

### 5.3.2 Prioritization Scheme

A numerical scoring system is used to prioritize projects. This prioritization serves as a guide for local government and State agencies when developing mitigation activities. Again, due to the State's geographical diversity, few projects are beneficial to the entire State. Therefore, in an effort to promote mitigation across the State and not negatively impact efforts for statewide participation, this project prioritization scheme has been designed to rank projects on a case by case basis. In many cases, a very good project in a lower priority category could outrank a mediocre project in a higher priority. The State does not want to restrict funding to only those projects that meet the high priorities because what may be a high priority for a specific community may not be a high priority at the State level. Irregardless, the project may be just what the community needs to mitigate disaster. The flexibility to fund a variety of diverse projects based on varying reasons and criteria is a necessity for a functional mitigation program at the State and District level. To implement this case-by-case concept, a more detailed process for evaluating and prioritizing projects has been developed. Any type of project, whether statewide or site-specific, will be prioritized in this more formal manner.

To prioritize projects, a general scoring system has been developed. This prioritization scheme has been developed based on input received from Stakeholders regarding what factors should be considered when prioritizing and selecting projects. These factors range from cost-benefit analysis, to details on the hazard being mitigated, to environmental impacts. Since planning projects are somewhat different than non-planning projects when it comes to reviewing them, different criteria will be considered, depending on the type of project.

#### *Factors for the non-planning projects include:*

- Cost
- Population Benefit
- Property Benefit
- Economic Benefit
- Project Feasibility (environmentally, politically, socially)
- Hazard Magnitude/Frequency
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development
- Potential project effectiveness and sustainability

#### *Factors for the planning projects include:*

- Cost
- Vulnerability of the community or communities
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development

Since some factors are considered more critical than others, two ranking scales have been developed. A scale of 1-10, 10 being the best, has been used for cost, population benefit, property benefit, economic benefit, and vulnerability of the community. Project feasibility, hazard magnitude/frequency, potential for repetitive loss reduction, potential to mitigate hazards to future development, and potential project effectiveness and sustainability are all rated on a 1-5 scale, with 5 being the best. The highest possible score for a non-planning project is 65 and for a planning project is 30. If needed, to allow for comparisons between

planning and non-planning grants, the planning score should be multiplied by 2. The guidelines for each category are as follows:

### ***Cost***

The Cost category includes the actual costs to design and complete the project and the costs associated with staff time to implement the project. For a 10 ranking, the project should cost less than \$100. For a 5 ranking, the project would cost roughly \$100,000, and for a 1 ranking, the project should cost over \$1,000,000.

### ***Population Benefit***

Population Benefit relates to the ability of the project to prevent the loss of life or injuries. A ranking of 10 has the potential to impact over 3,000 people. A ranking of 5 has the potential to impact 100 people, and a ranking of 1 will not impact the population. In some cases, a project may not directly provide population benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly effects the population, but should not be considered to have no population benefit.

### ***Property Benefit***

Property Benefit relates to the prevention of physical losses to structures, infrastructure, and personal property. These losses can be attributed to potential dollar losses. Similar to cost, a ranking of 10 has the potential to save over \$1,000,000 in losses, a ranking of 5 has the potential to save roughly \$100,000 in losses, and a ranking of 1 only has the potential to save less than \$100 in losses. In some cases, a project may not directly provide property benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly effects property, but should not be considered to have no property benefit.

### ***Economic Benefit***

Economic Benefit is related to the savings from mitigation to the economy. This benefit includes reduction of losses in revenues, jobs, and facility shut downs. Since this benefit can be difficult to evaluate, a ranking of 10 would prevent a total economic collapse, a ranking of 5 could prevent losses to about half the economy, and a ranking of 1 would not prevent any economic losses. In some cases, a project may not directly provide economic benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly affects the economy, but should not be considered to have no economic benefit.

### ***Vulnerability of the Community***

For planning projects, the vulnerability of the community is considered. A community that has a high vulnerability with respect to other jurisdictions to the hazard or hazards being studied or planned for will receive a higher score. To promote planning participation by the smaller or less vulnerable communities in the state, the score will be based on the other communities being considered for planning grants. A community that is the most vulnerable will receive a score of 10, and one that is the least, a score of 1.

### ***Project Feasibility (Environmentally, Politically & Socially)***

Project Feasibility relates to the likelihood that such a project could be completed. Projects with low feasibility would include projects with significant environmental concerns or public opposition. A project with high feasibility has public and political support without environmental concerns. Those projects with very high feasibility would receive a ranking of 5 and those with very low would receive a ranking of 1.

### ***Hazard Magnitude/Frequency***

The Hazard Magnitude/Frequency rating is a combination of the recurrence period and magnitude of a hazard. The severity of the hazard being mitigated and the frequency of that event must both be considered. For example, a project mitigating a 10-year event that causes significant damage would receive a higher rating than one that mitigates a 500-year event that causes minimal damage. For a ranking of 5, the project mitigates a high frequency, high magnitude event. A 1 ranking is for a low frequency, low magnitude event. Note that only the damages being mitigated should be considered here, not the entire losses from that event.

### ***Potential for Repetitive Loss Reduction***

Those projects that mitigate repetitive losses receive priority consideration here. Common sense dictates that losses that occur frequently will continue to do so until the hazard is mitigated. Projects that will reduce losses that have occurred more than three times receive a rating of 5. Those that do not address repetitive losses receive a rating of 1.

### ***Potential to Mitigate Hazards to Future Development***

Proposed actions that can have a direct impact on the vulnerability of future development are given additional consideration. Many parts of Montana are undergoing rapid growth and development. If hazards can be mitigated on the onset of the development, our state will be less vulnerable in the future. Projects that will have a significant effect on all future development receive a rating of 5. Those that do not affect development should receive a rating of 1.

### ***Potential Project Effectiveness and Sustainability***

Two important aspects of all projects are effectiveness and sustainability. For a project to be worthwhile, it needs to be effective and actually mitigate the hazard. A project that is questionable in its effectiveness will score lower in this category. Sustainability is the ability for the project to be maintained. Can the project sustain itself after grant funding is spent? Is maintenance required? If so, are or will the resources be in place to maintain the project. An action that is highly effective and sustainable will receive a ranking of 5. A project with effectiveness that is highly questionable and not easily sustained should receive a ranking of 1.



## Final Ranking

Upon ranking a project in each of these categories, a total score can be derived by adding together each of the scores. The project can then be ranking high, medium, or low based on the non-planning project thresholds in **Table 5.3-1**.

**Table 5.3-1 Project Ranking**

Non-Planning Project		Planning Projects	
Priority	Score	Priority	Score
High	40-65	High	20-30
Medium	25-39	Medium	10-19
Low	9-25	Low	4-9

## Examples

To demonstrate the use of this prioritization scheme, a few examples will be presented.

**Example 1:** This project proposes hiring a contractor to conduct Level 1 HAZUS-MH runs for flooding and earthquakes for each county in Montana. A brief report will be distributed to each county. The estimated cost is \$56,000.

Category	Score
Cost	7
Population Benefit	5
Property Benefit	5
Economic Benefit	3
Project Feasibility	4
Hazard Magnitude/Frequency	4
Potential for repetitive loss reduction	4
Potential to mitigate hazards to future development	4
Potential project effectiveness and sustainability	4
TOTAL	40

Therefore, this project would be considered a high priority.

**Example 2:** This project proposes upgrading culverts in a community to reduce flood losses. The estimated cost is \$35,000.

Category	Score
Cost	7
Population Benefit	4
Property Benefit	5
Economic Benefit	3
Project Feasibility	5
Hazard Magnitude/Frequency	5
Potential for repetitive loss reduction	3
Potential to mitigate hazards to future development	2
Potential project effectiveness and sustainability	3
TOTAL	38

Therefore, this project would be considered a medium priority.

**Example 3:** This project proposes hiring an employee or contractor to create a Statewide All-Hazard Emergency Alert System plan. The estimated cost is \$100,000.

Category	Score
Cost	5
Population Benefit	8
Property Benefit	5
Economic Benefit	2
Project Feasibility	5
Hazard Magnitude/Frequency	5
Potential for repetitive loss reduction	1
Potential to mitigate hazards to future development	3
Potential project effectiveness and sustainability	3
TOTAL	37

Therefore, this project would be considered a medium priority.

**Example 4:** This project proposes using existing resources to educate relevant agencies and lawmakers and propose legislation that will strengthen building codes for earthquake and wind. The estimated indirect personnel cost is \$30,000.

Category	Score
Cost	7
Population Benefit	7
Property Benefit	8
Economic Benefit	5
Project Feasibility	3
Hazard Magnitude/Frequency	4
Potential for repetitive loss reduction	1
Potential to mitigate hazards to future development	5
Potential project effectiveness and sustainability	3
TOTAL	43

Therefore, this project would be considered a high priority.

**Example 5:** This project proposes reducing fuels for in a subdivision of about 10 homes in the wildland/urban interface. To assess and complete the work, the estimated cost is \$20,000.

Category	Score
Cost	8
Population Benefit	3
Property Benefit	9
Economic Benefit	1
Project Feasibility	3
Hazard Magnitude/Frequency	3
Potential for repetitive loss reduction	2
Potential to mitigate hazards to future development	1
Potential project effectiveness and sustainability	4
TOTAL	34

Therefore, this project would be considered a medium priority.

**Example 6:** This project proposes completing a PDM plan for a county not participating in the program. The county is the most vulnerable county not in the program based on population and total residential structure value. The community has three NFIP repetitive loss structures. The estimated cost of the plan development is \$7,500.

Category	Score
Cost	8
Vulnerability of Community	10
Potential for repetitive loss reduction	3
Potential to mitigate hazards to future development	2
TOTAL	23

The non-planning score would be  $(23 \times 2)$  46, and therefore, a high priority.

### Final Prioritization Results

Once scored individually, a total score from each of the Mitigation Review Team members can be determined for each project. The highest scoring project would then be considered the greatest priority. The Mitigation Review Team, however, does have the opportunity to consider the rankings and modify them. If through discussion, the team decides that a project's ranking is inaccurate because of special circumstances, such as a high amount of match, timing with a related project, or a better fit with the goals of the funding source, then the team may change the priority of the project. Ultimately, how well a project meets the specific, established factors considered will determine how high of a priority the project is. If needed, the scoring system can be modified to suit the projects being evaluated. Refinement of the scoring system will occur as the prioritization scheme is used.